REMARKS

Claims 1-5 stand rejected. Claim 4 has been amended. Support for the amendment can be found generally throughout the specification and specifically in paragraphs 18-21 inclusive. Claims 1-5 are therefore now pending.

I. Specification

The specification stands objected to by the examiner for failure to capitalize a trademark "FluoSpheres" on page 10 of the specification and for inappropriate notation of an internet address on page 7 of the specification. Applicants respectfully traverse.

Applicants have capitalized the trademark FluoSpheres (FLUOSPHERES) on page 10, paragraph 28 in accordance with the Examiner's suggestion. Applicants have also cited the internet address on page 7, paragraph 22 in accordance with MPEP 707.05(e). Accordingly, Applicants respectfully submit that the objections to the specification be withdrawn.

II. Claim Rejections

A. 35 USC § 112

Claims 3 and 4 stand rejected under 35 U.S.C. 112, second paragraph, for alleged indefiniteness. Specifically, the Examiner contends that Claim 3 is indefinite with regard to the measurement of latex particles and cells by differential side scatter light and forward scatter light, while Claim 4 is indefinite as to the term "cells" therein. Applicants respectfully traverse.

Applicants note that the Claim 3 measurement of the latex particles and cells occurs by measuring the forward scatter light and the side scatter light at the same time, i.e., in one measurement. Specifically, the liquid sample containing cells and latex particles flows through the analytical chamber of a FACS instrument. A light beam, for example a laser beam, is directed at this chamber at a defined angle with respect to the flow direction of the liquid sample, e.g., perpendicular. The beam enters the analytical

chamber. If the beam "hits" a particle, either a latex particle to a cell, on its way through the chamber it is deflected. Therefore, the beam leaving the analytical chamber is deflected or scattered at an angle only when it "hits" a latex particle or a cell in its way through the analytical chamber.

Accordingly, the measured number of latex particles and cells is determined in the same, i.e. one, measurement by measuring both the side scatter light and forward scatter light - the side scatter light relaters to/emerges from the beam "hitting" a latex bead and the forward scatter light relates to/emerges from the beam "hitting" a cell (See, e.g. Paragraph [0021]) of the specification. Therefore, Applicant respectfully submits that Claim 3 is not indefinite and clearly points out/claims the subject matter of the invention and that the claim is in condition for allowance. Applicant requests that the 35 USC § 112 second paragraph rejection to claim 3 be hereby withdrawn.

With regard to Claim 4, Applicant has amended the claim to recite "cell sample" as suggested by the Examiner. By use of this term, as supported by the specification, all cells, which are present in the sample, i.e. total (dead, as well as alive cells) are human CD 34+ progenitor cells.

In light of the amendment to Claim 4, Applicant respectfully submits that the rejection to claim 4 has been obviated and that the claim is now in condition for allowance.

B. 35 USC § 102(b)

Claims 1-3 stand rejected under 35 U.S.C. 102(b) as being allegedly anticipated by Stevenson et al. (Cancer Res. 1986). Stevenson et al allegedly teach simultaneous measurements of macrophage-induced cytostatis (cells arrested read on as proliferation inhibition) and cytotoxicity of EMT6 cells by flow cytometry (abstract). Applicants respectfully traverse.

Applicants note that Stevenson et al. seem to report the determination of cytostasis and cytotoxicity of macrophages by measuring survival and growth of EMT6 cells following exposure to tumoricidal macrophages (abstract, first sentence). The main "purpose of this study was to measure cytostasis, cytotoxicity, and regrowth of surviving tumor cells as a function of time" (page 99, right column, beginning of first full paragraph). In the discussion section (page 103) the authors allegedly outline that "the capability of simultaneously examining cell killing and cytostasis is reported (emphasis added). However, the term simultaneous (which is not defined in Stevenson et al.) seems to require two discrete samples processed separately by different analytical methods. (See Materials and Methods Section).

Applicants invention however, defines a "simultaneous determination" to be a determination in which "the parameters are determined while the cells from one sample are flowing through the analytical means of the apparatus either in parallel or immediately one parameter after another" (emphasis added; [0021], lines 4 to 6 of the description). This indicates that all parameters, i.e. cell proliferation inhibition activity and toxicity, have to be determined from the same, i.e. one, sample (emphasis added). This stands in direct contract to the Stevenson article. In the "Materials and Methods" section of Stevenson et al. on page 100 in the subsection "Staining Cells for Flow Analysis" i) fixed cells, i.e. all cells, have been stained with the dye MI, (one sample) and that ii) viable cells have been stained with the dye HO (second sample). These two discrete samples (fixed and viable) are then further processed separately as can be seen from the subsection "Flow System Analysis' wherein different analytical methods are used to analyze "MI-stained cells" and "HO-stained viable cells" (emphasis added).

Thus Stevenson's method stands in contrast to Applicant's invention wherein the simultaneous determination of cell proliferation inhibition activity and cell toxicity by the determination of the number of dead or viable cells and the determination of the number of total cells within same sample, i.e. only one sample is required and has to be prepared (emphasis added). Accordingly, wherein the cited art does not anticipate

each and every step of Applicant's method, Applicants respectfully submit that the 102(b) rejection should be withdrawn and that Claims 1-3 are in condition for allowance.

C. 35 USC § 103(a)

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Stevenson et al. in view of Ferlini et al. (Pharmacology & Toxicology 2001, 89, 231=236). The Examiner acknowledges that Stevenson et al. do not teach the use of human CD34+ progenitor cells and the automation (use of multiple device and automated pipetting) of Applicant's method.

The Examiner asserts that Ferlini et al. allegedly teaches a new method to evaluate toxicity of antitumor agents with human CD34+ progenitor cells (see abstract) via a "high throughput method" (flow cytometric analysis apparatus by automate pipetting) to assess myelotoxic effects in microplates (multiple device), thus minimizing time required for the analysis (page 235, right panel, lines 13-17). Applicants respectfully traverse.

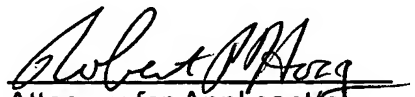
Applicants first hereby note for the record and reiterate the comments about Stevenson et al in Section II(B) above. Stevenson requires two samples and two analytical measurement methods. Stevenson does not teach nor show a method of determination via one sample. Ferlini et al. is silent about a method for the simultaneous determination of cell proliferation inhibition activity and cell toxicity. There is also no hint in Ferlini et al. towards the method of the current invention, i.e. to a method wherein the viable or dead cell number and the total cell number is determined within the same sample, i.e. with a method wherein only one sample preparation has to be performed.

A combination of Stevenson et al. and Ferlini et al. therefore would allegedly teach at best a method for the high-throughput-determination of cytostatic and cytotoxic effects by the determination of the cell number in two independently prepared samples

to assess the effect of one compound, i.e. the determination of the total cell number in a first sample and the determination of the viable cell number in a second sample. Accordingly, two measurements would be required for the analysis of one compound in two samples. In contrast to this combination of Stevenson and Ferlini, Applicants invention discloses a method wherein the assessment of the cytotoxic and cytostatic effects can be done with only one measurement and therefore with only one sample prepared. Accordingly, as the cited references do not teach Applicants invention, Applicants respectfully submit that Claims 1-5 as now presented are in condition for allowance.

No further fee is required in connection the filing of this Amendment. If any additional fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,



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